**RATES OF REACTIONS POEM**

The factors influencing the rate of a reaction are many indeed.

Because as we all know, they influence a reaction’s speed.

The **concentrations** of the reactants increase the frequency of particle collisions.

The **nature of reactions** too, meaning their physical state in our visions.

A big one, **temperature**, as it goes up – the reaction time goes down.

If the reaction involves a solvent; a solid in a liquid, it all depends on the **ionic strength** found.

Even so, **pressure** is a factor.

Gas reactions depend on it to go faster.

**Electromagnetic radiation** breaks bonds and promotes vibrations.

And a **catalyst** is like a really good friend, it creates socializations.

**Isotopes** too, we’re talking the **Kinetic** **Isotope Effect**.

Cause different reaction rates in molecules with different isotopes with no neglect.

Of course **surface area** is important too;

The greater the area, the better the stew.

Even the **order** in which the reactants are added,

Affects the concentration of reactants reacted.

By George, who knew?

Even **stirring** a heterogeneous mixture affects it too.

Finally the **intensity of light**;

More energy in the reaction means it’s bright.

With all this in mind,

It’s easy to find,

That rates of reactions are one of a kind.

Though never forget the **rate law**[[1]](#footnote-2) too.

r = k (T) [A] superscript n, [B] superscript m. Woo hoo.

k times [T], well that’s rate constant you see.

n and m are reaction orders, that’s key.

Plus [A] and [B] are the reactants, goodness me.

All in all, the rate law’s cool.

With the factors of rates we are sure to rule (…the world)!

1. r = k (T) [A]n [B]m [↑](#footnote-ref-2)